

# THE IDENTITY OF *CHELIFER COMMUNIS* VAR. *PENNSYLVANICUS* AND DESCRIPTION OF A NEW SPECIES OF *LUSTROCHERNES* (PSEUDOSCORPIONIDA: CHERNETIDAE)<sup>1</sup>

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**ABSTRACT:** Study of a syntype of *Chelifer communis* var. *pennsylvanicus* Ellingsen reveals that it belongs in the genus *Americhernes*, not in *Lustrochernes* as has long been supposed. The species of *Lustrochernes* actually inhabiting the southeastern United States is described as *L. carolinensis* and is compared with *L. grossus* and *L. viniai*, the other 2 species known to occur in the U.S.A.

Ellingsen (1910:366) described a new variety of *Chelifer communis* Balzan from Pennsylvania, simply:

"var. *pennsylvanicus* nov.

"Aus Pennsylvanien stammen 4 Ex.(von Zimmermann gesammelt), die keinen wesentlichen Unterschied von kleinen südamerikanischen Tierchen dieser Art zeigen. Die pennsylvanischen Ex. sind klein, scheinen trotzdem vollständig entwickelt und ausgefärbt zu sein; die Hand ist verhältnismässig etwas kräftiger als bei den Südamerikanern."

In the absence of sufficient information, Beier (1932) was unable to place this form precisely, but listed it as an uncertain species of the genus *Lustrochernes* (to which he had transferred *Chelifer communis*). Citing Beier without reservation, Hoff and Bolsterli (1956:167) considered this a distinct species and mentioned new records from Louisiana and Mississippi ("the first — since the original from Pennsylvania"); they also provided measurements for three males from Louisiana (no females were available); purporting to demonstrate that the species does indeed "differ from *L. communis* by having a smaller body size and a stouter chela." The only other references in the literature to *L. pennsylvanicus* (Hoff 1958; Weygoldt 1969; Muchmore 1990) add no new morphological information about the species. Recently, it has been reported that *Chelifer communis* Balzan does not belong in *Lustrochernes* but rather in the genus *Gomphochernes* (Mahnert 1985:78).

Because valid representatives of the genus *Lustrochernes* do occur rather commonly throughout the southeastern United States, it is of interest to know the identity of the specimens on which Ellingsen based

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the variety *pennsylvanicus*. Through the kind cooperation of Dr. M. Moritz of the Zoologisches Museum in Berlin, one of the syntypes of that form was borrowed, mounted on a microscope slide and studied carefully, with the following results.

The specimen, a female (ZMB Kat. Nr. 29723; here designated the **LECTOTYPE**), is much smaller than expected for a *Lustrochernes*. Measurements (mm) are: Body length 2.47. Carapace length 0.695. Chelicera length 0.235. Palpal trochanter 0.37 by 0.205; femur 0.60 by 0.27; tibia 0.54 by 0.275; chela (without pedicel) 0.90 by 0.325; hand (without pedicel) 0.52 by 0.30; pedicel length 0.075; movable finger length 0.445. Leg IV: entire femur 0.56 by 0.215; tibia 0.40 by 0.13; tarsus 0.28 by 0.08. These measurements are, on the other hand, typical of *Americhernes oblongus* (Say), a common species in the eastern United States, which might easily be mistaken for a small *Lustrochernes* (see Muchmore 1976:153). Examination of other features, including shape and proportions of the palpal segments, placement of trichobothria on the palpal chela and shape of the spermathecae, reveals that this specimen is indeed conspecific with *A. oblongus*. Thus *Chelifer communis* var. *pennsylvanicus* Ellingsen (1910) does not belong in *Lustrochernes* (or *Gomphochernes*) at all, but is a synonym of *Chelifer oblongus* Say, which was described in 1821.

This revelation leaves the eastern U.S. form of *Lustrochernes* without a specific name, a situation which is remedied below.

Specimens used in the following study are from the Florida State Collection of Arthropods, Gainesville, FL, [FSCA], unless otherwise noted. Materials from other institutions are designated as follows.

- ACC - Academia de Ciencias de Cuba, La Habana, CUBA.
- AMNH - American Museum of Natural History, New York, NY.
- CUIC - Cornell University Collection of Insects, Ithaca, NY.
- MCZ - Museum of Comparative Zoology, Harvard University, Cambridge, MA.
- USNM - National Museum of Natural History, Washington, DC.
- YALE - Peabody Museum of Natural History, Yale University, New Haven, CT.

### *Lustrochernes carolinensis*, new species

Figs. 1-5

*Lustrochernes pennsylvanicus* (Ellingsen), Hoff and Bolsterli  
1956:167 (in part); Hoff 1958:21 (in part); Weygoldt  
1969:114; Muchmore 1990:519 (in part).

**Description** (based on the type series).- Male and female much alike, but male a little smaller and with slightly stouter appendages. Carapace light brown, palps darker reddish brown, other parts tan. Setae generally long and acuminate or sparsely denticulate. Carapace a little longer than wide; surface smooth, with a distinct, broad transverse furrow at about middle; 2 eyespots; 70-80 vestitural setae, 4 at anterior and 12-16 at posterior margins. Abdomen elongate; tergites 2 or 3-10 and sternites 4-10 divided; surfaces smooth. Tergal chaetotaxy of holotype 18:19:16:21:22:24:23:24:23:24:T5TTTT5T:2 (setae distributed on the lateral, medial and posterior margins and occasionally on the disc of each half tergite); others generally similar. Sternal chaetotaxy of holotype male 22:[3-2]/(3)13(3):(1)6(1):21:24:22:28:26:25:T5TTTT5T:2; other males similar. Anterior genital operculum of female with a compact group of 12-15 small setae centrally located and 3-5 small setae on each side posteriorly, much as in *Americhernes oblongus* (see Muchmore 1976:fig. 4); posterior operculum with marginal row of 10-12 small setae; anterior stigmatic plates with 3 or 4 setae each and posterior plates with 1. Internal genitalia of male as shown in Fig. 1, large and well sclerotized, without any conspicuous projection on the ventral side. Spermathecae of female generally as shown in Fig. 2, somewhat hammer-shaped, but may appear round if not favorably positioned.

Chelicera 0.35-0.40 as long as carapace; hand with 5 setae, *ls* and *is* long, acuminate, others much shorter, sparsely denticulate; flagellum of 3 setae, the distal one serrate; galea in both sexes large, with 6-10 rami.

Palp rather robust (Fig. 3); femur 2.1-2.4, tibia 1.9-2.1, chela (without pedicel) 2.4-2.6 times as long as broad; hand (without pedicel) 1.4-1.55 times as long as deep; movable finger 0.7-0.8 as long as hand. Surfaces smooth except small granules on medial sides of femur, tibia and chelal hand; trochanter with a prominent dorsal protuberance. Trichobothria as shown in Fig. 4; *est* clearly distad of middle of fixed finger, *it* closer to finger tip than distance between *ist* and *isb*. Venom apparatus well developed in movable finger, nodus ramosus closer to trichobothrium *t* than to *st*. Fixed finger with 28-33 and movable finger with 32-38 cusped marginal teeth; each finger with 8-12 external and 3-6 internal accessory teeth.

Legs moderately slender; leg IV with entire femur 2.7-3.2; tibia 3.55-3.85 and tarsus 3.8-4.1 times as long as deep (Fig. 5). Leg IV tibia with a very long acuminate tactile seta near middle, and tarsus with a similar seta about  $\frac{1}{4}$  distance from proximal end; telofemur with a long seta, often bearing 1 or 2 spinules, near distal end. Subterminal tarsal setae curved, simple.

**Measurements** (mm).- Male (figures given first for holotype, followed in parentheses by those of the 2 paratypes): Body length 3.58 (3.48-3.57). Carapace length 1.01 (1.03-1.16). Chelicera length 0.39 (0.36-0.39). Palpal trochanter 0.56 (0.545-0.62) by 0.31 (0.32-0.39); femur 0.935 (0.92-1.07) by 0.415 (0.43-0.495); tibia 0.90 (0.90-1.04) by 0.45 (0.43-0.53); chela (without pedicel) 1.48 (1.48-1.61) by 0.60 (0.59-0.68); hand (without pedicel) 0.90 (0.87-1.02) by 0.615 (0.595-0.68); pedicel length 0.09-0.12; movable finger length 0.72 (0.66-0.73). Leg I: basifemur 0.29 (0.27-0.32) by 0.20 (0.20-0.21); telofemur 0.49 (0.48-0.55) by 0.19 (0.20-0.21); tibia 0.49 (0.47-0.53) by 0.13 (0.13-0.14); tarsus 0.36 (0.385-0.41) by 0.095 (0.095). Leg IV: entire femur 0.90 (0.875-0.99) by 0.31 (0.32-0.37); tibia 0.695 (0.675-0.775) by 0.185 (0.19-0.205); tarsus 0.495 (0.48-0.545) by 0.125 (0.13-0.135).

Female: Ranges for the allotype and 5 paratypes. Body length 3.91-4.78. Carapace length 1.01-1.12. Chelicera length 0.38-0.42. Palpal trochanter 0.52-0.59 by 0.29-0.315; femur 0.85-0.99 by 0.385-0.43; tibia 0.805-0.96 by 0.42-0.47; chela (without pedicel) 1.42-1.65 by 0.565-0.63; hand (without pedicel) 0.855-0.99 by 0.59-0.64; pedicel length 0.10-0.12; movable finger length 0.64-0.705. Leg IV: entire femur 0.84-0.98 by 0.285-0.31; tibia 0.645-0.73 by 0.18-0.19; tarsus 0.48-0.53 by 0.12-0.13.

The slide-mounted material listed below has been studied and mea-

sured and found to conform rather closely to the description of the types, though a few scattered measurements and ratios are a little above or below the ranges given. The other specimens, not mounted on slides, appear certainly to be conspecific with the mounted ones. The specimens from Louisiana reported by Hoff and Bolsterli (1956) as *L. pennsylvanicus* are a little smaller than most of the more eastern representatives, but clearly they are *L. carolinensis*.

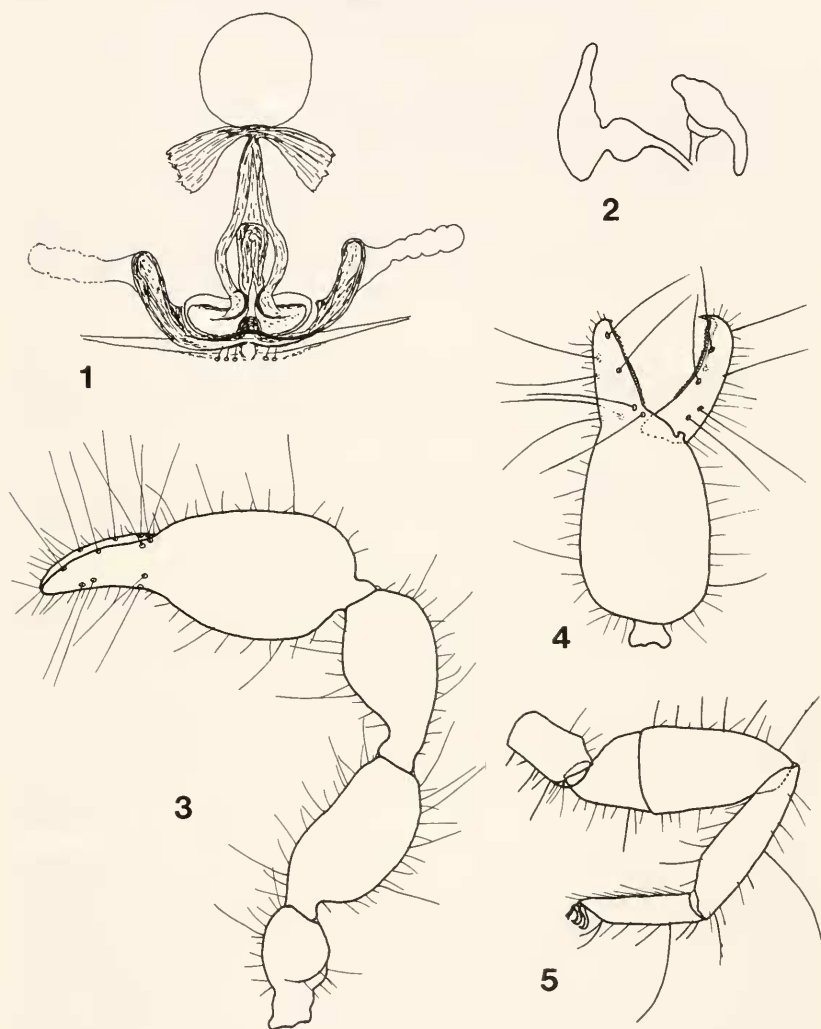
**Etymology.**- The species is named *carolinensis* for the type locality in North Carolina.

**Type data.**- Holotype male (WM918.01008), allotype female (WM918.01006) and 9 paratypes (2 ♂, 5 ♀, 1 tritonymph, 1 protonymph): NORTH CAROLINA: Carteret Co., Beaufort, January 1966, P. Weygoldt, under bark of trees. Deposited in Florida State Collection of Arthropods, Gainesville, FL.

**Non-type material studied, mounted on slides.**- FLORIDA: locality?, 5 May 1949, Jennings, from cerambycid at light, 2 ♂, 3 ♀; Alachua Co., December 1947, H.K. Wallace, 1 ♂, 1 ♀; Alachua Co., Sugarfoot Hammock, 1 April 1949, I.J. Cantrall, 1 ♂, 1 ♀; Alachua Co., Gainesville, 9 February 1950, T.G. Steward, 1 ♂; Citrus Co., Yulee State Park, 29 November 1963, S. Peck, 1 ♂; Clay Co., Camp Crystal, 20 May 1961, H.V. Weems, Jr., under bark of dead *Quercus virginiana* Mill., 1 ♀; Marion Co., Rainbow Springs, 25 June 1960, H.V. Weems, Jr., in fungus, 2 ♀; Putnam Co., 5 January 1960, H.V. Weems, Jr., under bark of rotting *Quercus virginiana*, 1 ♀; Putnam Co., 2 March 1960, H.V. Weems, Jr., under bark of *Quercus laevis* Walt., 1 ♂; Volusia Co., New Smyrna Beach, 21 July 1961, G. W. Desin, in truck, 1 ♂; Volusia Co., De Leon Springs, 29 April 1969, R.E. Woodruff, 1 ♀. GEORGIA: Thomas Co., Thomasville, Tall Timbers R. Sta., Millpond, 22 December 1967, W. Sedgewick, 1 ♂, 2 ♀ [MCZ]. LOUISIANA: St. Tammany Par., Slidell, 30 September 1973, W.F. Rapp, 1 ♂. MISSISSIPPI: Hinds Co., Raymond, 10 July 1961, R.C. and A. Graves, 1 ♂, 1 ♀.

**Non-type material, not mounted.**- FLORIDA: Alachua Co., Gainesville, 3 August 1967, R.P. Esser, under elytra of cerambycid beetle, *Stenodontes dasytomus* (Say), 2 ♂, 1 ♀; Columbia Co., O'Leno State Park, 21 August 1949, H. Dybas, ex herb. polypore, 1 ♂; Hernando Co., 6 mi. NW Brooksville, 21 June 1955, H. Dybas, 1 ♂; Highlands Co., Highlands Hammock, 6 mi. W. Sebring, 23 August 1969, H. Dybas, 1 ♂; Highlands Co., Parker Island, 7 mi. SE Lake Placid, 19 June 1955.; H. Dybas, in Sabal palmetto log, 1 ♂, 1 ♀; Liberty Co., Torreya State Park, 9 June 1975, J. Beatty, on *Stenodontes dasytomus* (Say) taken at black light at night, 1 ♂, 6 ♀; Orange Co. Orlando, 1 June 1972, E. Harper, on desk in office, 1 ♂. NORTH CAROLINA: Johnston Co., Clayton, 4 July 1978, F. Scott, "Apparently phoretic on large carabid beetles attracted to light traps," 2 ♀.

**Remarks.**- It is interesting to note that *L. carolinensis* seems to be confined to rather low elevations (about 100 m or less) from North Carolina to Louisiana. It has not been found in Pennsylvania (or Maryland or Virginia) despite good collection, and so continued use of the name *pennsylvanicus* would have been inappropriate. Its presence in Texas is suspected but not yet confirmed, because of uncertainties about the characteristics of some more southern species.



Figs. 1-5, *Lustrochernes carolinensis*, n. sp.: 1, internal genitalia of male, anteroventral; 2, spermathecae of female, ventral; 3, right palp, dorsal; 4, right chela, lateral; 5, leg IV, anterior.



*Lustrochernes grossus* (Banks)

Figs. 6-8

*Chelanops grossus* Banks 1893:65, 1902:220.*Chelanops* (?) *grossus*, Beier 1932:179; Roewer 1937:302.*Lamprochernes grossus*, Hoff 1947:475-478, fig. 1.*Lustrochernes grossus*, Hoff 1956:10, 1958:21, 1961:446;

Muchmore 1990:519.

This species has been described fairly well in papers by Hoff (1947, 1956, 1961). The ranges in measurements and proportions for the specimens from Colorado and New Mexico reported there [AMNH] are as follows.

**Measurements (mm).**- Body length 3.3-4.5. Carapace length 0.96-1.07. Palpal trochanter 0.55-0.64 by 0.28-0.39; femur 0.76-0.98 by 0.35-0.44; tibia 0.82-1.03 by 0.34-0.44; chela (without pedicel) 1.28-1.48 by 0.42-0.55; hand (without pedicel) 0.69-0.86 by 0.42-0.55; movable finger length 0.57-0.70. Leg IV: entire femur 0.75-0.88 by 0.26-0.295; tibia 0.56-0.66 by 0.16-0.18; tarsus 0.39-0.43 by 0.11-0.12.

**Proportions.**- Palpal femur 2.1-2.4, tibia 2.1-2.45, and chela (without pedicel) 2.6-3.0 times as long as broad; hand (without pedicel) 1.4-1.8 times as long as deep; movable finger 0.75-0.88 as long as hand. Leg IV: entire femur 2.8-3.15, tibia 3.4-3.85, and tarsus 3.5-3.9 times as long as deep.

Males generally have smaller bodies than females, but have slightly larger and more slender appendages.

Several other collections, totalling 12 males and 15 females, from Arizona (Cochise, Coconino, Graham, and Navajo counties) and New Mexico (Sandoval Co.) have been studied by me. They conform rather closely to the measurements and proportions given above, only a few data being outside the listed ranges, mostly on the high side. In other respects as well, they are similar to Hoff's specimens and obviously belong to *L. grossus*.

In his redescription of the species, based entirely on females, Hoff (1947) did not mention the spermathecae. Later, however, Hoff (1956:11) characterized them as follows, based apparently on many specimens from New Mexico: "The seminal receptacle of the female appears somewhat variable, ranging from an oval bulb placed transversely at the end of a short stalk to a distinctly T-shaped or hammer-shaped structure." My own restudy of the two female types of *Chelanops grossus* Banks mounted by Hoff (in MCZ) reveals that the lectotype (specimen labelled "#1") displays the spermathecae in excellent fashion (see Fig. 6). They are distinctly hammer-shaped, much like those of *L. carolinensis* (see Fig.

2). The variability mentioned by Hoff is probably due to the varied orientation of the spermathecae in his mounted specimens.

The internal genitalia of the male were not mentioned at all by Hoff. My own study of many males from Arizona and New Mexico shows that the genitalia of this species have an unusual structure (Fig. 7). Generally, the parts are like those of *L. carolinensis* (Fig. 1) and *L. viniai* Dumitresco and Orghidan (1977:fig. 15B), but in *L. grossus* there is a prominent long, cylindrical process extending forward from about the middle on the ventral side. As far as I know such a process is seen elsewhere only in the allied genus *Cordylocheres* Beier (personal observation). The exact nature and function of this structure are not yet known.

Hoff (1956:10, 11) mentioned, but did not illustrate, the fact that there are tactile setae on both tibia and tarsus of leg IV in this genus and species (see Fig. 8). It can be added here that there is also a conspicuous long seta near the distal end of the telofemur; this seta, however, unlike the tibial and tarsal tactile setae, often can be seen to possess 1 or 2 tiny spinules.

**Types examined.**- COLORADO: Dr. C.F. Baker, female lectotype (here designated, specimen #1 mounted by C.C. Hoff) and female paralectotype (here designated, specimen #2 mounted by C.C. Hoff) [MCZ].

**Other material studied, mounted on slides.**- ARIZONA: Cochise Co., Southwestern Research Station, 5 mi. W Portal, 26 June 1956, O.L. Cartwright, 2 ♂ [USNM]; Cochise Co., same locality, 17 July 1963, V. Roth, on *Tragosoma chiricahuae* Linsley, 1 ♂, 1 ♀; Cochise Co., Eslope Chiricahua Mts., 5000 ft., 13 July 1958, C.W. O'Brien, 3 ♂, 4 ♀; Coconino Co., Walnut Canyon, near Flagstaff, 6500 ft., 7 August 1965, J.G. Franclemont, on prionids, *Ergates spiculatus* LeConte, 1 ♂, 1 ♀ [CUIC]; Coconino Co., Hilltop-Dinosaur Road, 5 April 1968, E.A. Richmond, under bark of butt of cut ponderosa pine, 2 ♂, 4 ♀; Graham Co., Graham Mts., Pinecrest, 6 August 1958, C. O'Brien, under bark Douglas fir, 2 ♂, 1 ♀; Pima Co., Santa Catalina Mts., 8 May 1971, L. McCann, under rock, 1 ♀. NEW MEXICO: Sandoval Co., Frijoles Canyon, 17 August 1961, C.L. and J.E. Remington, under bark dead *Pinus*, 1 ♂, 3 ♀ [YALE].

**Remarks.**- It was noted above that this species resembles a *Cordylocheres* in the possession of a long ventral process on the male genitalia. But it should also be pointed out that *grossus* lacks two characteristics that have been considered diagnostic for *Cordylocheres*, namely, the prominent protuberance on the palpal tibia and the slender legs (see Beier 1932:82, 99). Given Beier's definition of *Cordylocheres*, this species cannot be considered a representative of that genus, and must, for the present, be retained in *Lustrocheres*.

*Lustrochernes viniai* Dumitresco and Orghidan

Fig. 9

*Lustrochernes viniai* Dumitresco and Orghidan 1977:113-118, Figs. 13-15.

This species was well described and illustrated on the basis of a series of specimens collected in a cave in Camaguey Prov., Cuba. Dumitresco and Orghidan properly emphasized the future importance of genitalic structures in chernetid taxonomy and provided excellent illustrations of both female and male internal genitalia (1977:figs. 14F, 15B). Additional specimens available to the present author, from a cave in Pinar del Rio Prov., Cuba, and from Key Largo, Monroe Co., Florida, conform well to the description of the types, necessitating only a few additions and occasional emphasis.

The carapace and palps of *L. viniai* are dark brown, sometimes blackish, in marked contrast to the abdomen and appendages, which are much lighter brown.

The eyes of *L. viniai* are very small and faint on intact animals and are not noticeable at all on mounted specimens.

Both the median and posterior transverse furrows on the carapace are distinct, as pointed out by Dumitresco and Orghidan (1977:113).

The terminal sacs of the spermathecae of present females (Fig. 9) are more ovoid than those illustrated by Dumitresco and Orghidan (1977:fig. 14F); they are, however, not as elongate (hammer-shaped) as those of *L. carolinensis* and *L. grossus*.

The internal genitalia of the male of *L. viniai* are similar to those of *L. carolinensis*; no ventral process like that in *L. grossus* is present.

Dumitresco and Orghidan (p. 114) state, with respect to leg IV, "Le tibia et le fémur portent chacun une longue soie 'pseudotactile'. Les autres soies des articles sont courtes et simples, sauf celles de la marge externe du fémur qui sont dentées." Their figure 14E, on the other hand, shows that it is the tibia and especially the tarsus (not the femur) which bear the long "pseudotactile" setae; present specimens agree with the figure, with long, acuminate tibial and tarsal tactile setae. In addition, it should be noted, there is a prominent elongate, denticulate seta near the distal end of the telofemur; this seta is obvious in all present specimens.

As pointed out by Dumitresco and Orghidan (p. 113), the chelal hand, especially of the male, "se caractérise par sa forme bulbeuse," that is, expanded at the base and distinctly rounded (figs. 14A, 14B). This feature seems to be characteristic of *L. viniai* within the genus.

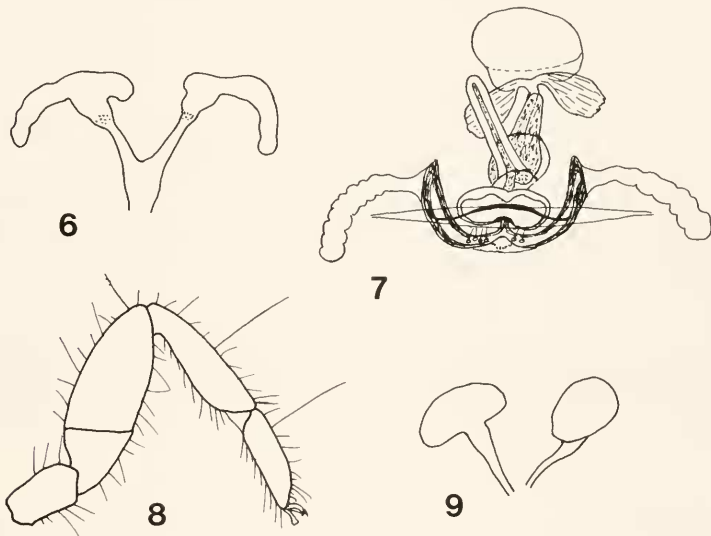
Ranges in measurements and proportions for the mounted specimens from Cuba (1 ♂, 7 ♀) and Florida (2 ♂, 6 ♀) are as follows.



**Measurements (mm).**- Males (females): Body length 3.00-3.65 (3.14-4.57). Carapace length 0.89-1.01 (0.95-1.11). Chelicera length 0.33-0.37 (0.34-0.385). Palpal trochanter 0.51-0.615 (0.51-0.635) by 0.26-0.31 (0.26-0.37); femur 0.805-1.02 (0.78-1.16) by 0.33-0.41 (0.31-0.46); tibia 0.805-1.04 (0.80-1.11) by 0.355-0.43 (0.35-0.52); chela (without pedicel) 1.33-1.70 (1.33-1.84) by 0.48-0.635 (0.52-0.69); hand (without pedicel) 0.68-0.925 (0.725-1.07) by 0.53-0.665 (0.52-0.70); pedicel length 0.10-0.12 (0.10-0.13); movable finger length 0.69-0.89 (0.62-0.85). Leg IV: entire femur 0.76-0.93 (0.79-1.02) by 0.235-0.275 (0.24-0.31); tibia 0.59-0.77 (0.615-0.835) by 0.14-0.16 (0.14-0.19); tarsus 0.465-0.56 (0.48-0.615) by 0.095-0.11 (0.095-0.125).

**Proportions.**- Males (females): Palpal femur 2.45-2.6 (2.4-2.7), tibia 2.25-2.4 (2.0-2.45), and chela (without pedicel) 2.65-2.8 (2.5-2.9) times as long as broad; hand (without pedicel) 1.3-1.4 (1.4-1.6) times as long as deep; movable finger 0.96-1.01 (0.78-0.90) as long as hand. Leg IV: entire femur 3.25-3.7 (3.1-3.7), tibia 4.2-4.8 (4.3-4.9), and tarsus 4.9-5.1 (4.7-5.2) times as long as deep.

**Material examined.**- CUBA: Pinar del Rio Province, Vinales, Cueva del Indio, 23 January 1975, J. de la Cruz, 1 ♂, 5 ♀; same locality, 25 January 1975, J. de la Cruz, on guano, 2 ♀ [ACC]. FLORIDA: Monroe Co., Key Largo, 8 August 1971, S. Peck, hardwood litter, 2 ♂, 3 ♀; Monroe Co., Upper Key Largo, 22 March 1968, R.E. Woodruff, berlese of pack rat nest, 3 ♀; Monroe Co., North Key Largo, 5 March 1976, V. Brach, under log in hammock 1 ♂, 2 tritonymphs; Monroe Co., Key Largo, Pennekamp State Park, 2 November 1984, S. and J. Peck, hardwood hammock, leaf-log litter, 6 ♂, 1 ♀, 6 nymphs [FSCA].



Figs. 6-8, *Lustrochernes grossus* (Banks): 6, spermathecae of lectotype female, ventral; 7, internal genitalia of male, anteroventral; 8, leg IV, anterior.

Fig. 9, *Lustrochernes viniai* Dumitresco and Orghidan, spermathecae of female, ventral.

The records of *L. viniai* from Key Largo are the first for the United States. The species is presently known only from Cuba and Florida.

## DISCUSSION

C.C. Hoff's "List of the pseudoscorpions of North America north of Mexico" (1958) includes 4 species under the genus *Lustrochernes*, namely:

- Lustrochernes grossus* (Banks)
- Lustrochernes pennsylvanicus* (Ellingsen)
- Lustrochernes? acuminatus* (Simon)
- Lustrochernes? floridanus* (Tullgren)

Hoff followed Beier (1932) and Roewer (1937) in placing *Atemnus floridanus* Tullgren, 1900 tentatively in *Lustrochernes*. Later, however, he concluded that *A. floridanus* is a synonym of *Atemnus elongatus* Banks, 1895, which he had assigned to the genus *Paratemnus* (Hoff 1964).

*Chelifer* (*Chelanops*) *acuminatus* Simon, 1878 has never been studied since the original description. Banks' record of the species from Olympia, Washington is unsubstantiated. Hoff followed Beier (1932) and Roewer (1937) in placing this species in *Lustrochernes*; this assignment may be correct, but its validity must await future study.

The synonymy of *Chelifer communis* var. *pennsylvanicus* Ellingsen with *Americhernes oblongus* (Say) has been demonstrated above.

*Chelanops grossus* Banks (1893) is here considered a representative of *Lustrochernes*, though the distinctive structure of the male genitalia raises some question about this. Certain placement must await redescription of the type species of *Lustrochernes* (*Chelifer argentinus* Thorell, 1877) and accurate definition of the genus.

The species of *Lustrochernes* commonly occurring in the southeastern United States is newly described as *L. carolinensis*. It is compared with *L. grossus* from southwestern states and with *L. viniai*, a Cuban species also found on the Florida Keys. These three *Lustrochernes* species may be separated by use of the following key:

1. Internal genitalia of male with a long anteriorly-directed ventral process; in southwestern U.S. .... *grossus* (Banks)
- 1'. Internal genitalia of male without such a process; in southeastern U.S. and Cuba ..... 2
2. Terminal sacs of spermathecae of female hammer-shaped; chelal hand essentially parallel-sided; mainland U.S., from North Carolina to Louisiana ..... *carolinensis* Muchmore
- 2'. Terminal sacs of spermathecae of female round or oval; chelal hand bulging at base, especially in male; Florida Keys and Cuba ..... *viniai* Dumitresco and Orghidan

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